

ABSTRACT OF THE DISCLOSURE

A durable silver film thin film coated non-planar optical element has been developed to replace Gold as a material for fabricating such devices. Such a coating and resultant optical element has an increased efficiency and is resistant to tarnishing, can be easily stripped and re-deposited without modifying underlying grating structure, improves the throughput and power loading of short pulse compressor designs for ultra-fast laser systems, and can be utilized in variety of optical and spectrophotometric systems, particularly high-end spectrometers that require maximized efficiency.